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FINNEGAN, HENDERSON, FARABOW, GARRETT & DUNNER LLP 901 NEW YORK AVENUE, NW WASHINGTON, DC 20001-4413				MURRAY, DANIEL C
ART UNIT		PAPER NUMBER		
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/554,638	BRUNO ET AL.	
	Examiner	Art Unit	
	DANIEL C. MURRAY	2443	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 16 June 2009.
 2a) This action is **FINAL**. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 24-47 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) Claim(s) _____ is/are allowed.
 6) Claim(s) 24-47 is/are rejected.
 7) Claim(s) _____ is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____ .
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)	5) <input type="checkbox"/> Notice of Informal Patent Application
Paper No(s)/Mail Date _____.	6) <input type="checkbox"/> Other: _____ .

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. **Claims 24, 27, 30-32, 36, 39, 40-42, and 46** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Blake et al. (US Patent # 6,067,412)** in view of **Spaid (US Patent # US 7,269,643 B2)**.

a) Consider **claims 24 and 36**, Blake et al. clearly show and disclose, a method and system, implemented using a computer system, for evaluating download performance of web pages accessible via a network comprising the steps of: providing at least one model to said computer system for predicting a set of download performance parameters for said web pages, said at least one model including at least one optimization parameter (abstract, column 3 lines 51-57); measuring, using said computer system, said set of download performance parameters for said sample web pages (abstract, column 3 lines 48-53); evaluating, using said computer system, said set of download performance parameters for said sample web ages on the basis of said at least one model for different values of said at least one optimization parameter (abstract, column 3 lines 60-63, column 4 lines 11-49); defining, using said computer system, an error indicative of the difference between said set of download performance parameters for said sample web pages as measured and as evaluated on the basis of said at least one model, respectively (abstract, column 4 lines 29-38); selecting, using said computer system, an optimized model including a value of said at least one optimization parameter in order to reduce said error below a predetermined value (abstract, column 4 lines 56-61); and evaluating, using said computer system, said set of download performance parameters for said selected set of use web pages on the basis of said optimized model (abstract, column 4 lines 62-67 column 5 lines 1-4). However, Blake et al. does not specifically disclose web pages or defining/selecting, using said computer system, a set of web pages.

Spaid shows and discloses web site quality measurement system and method, wherein Spaid discloses defining/selecting, using said computer system, a set of web pages (abstract, column 2 lines 54-61).

Therefore, it would have been obvious to one of ordinary skill in the art that the time the invention was made to incorporate defining/selecting, using said computer system, a set of web pages, as taught by, Spaid into the system of Blake et al. for the purpose of measuring the quality of web pages (Spaid; abstract).

b) Consider **claims 27 and 39, and as applied to claims 24 and 36 above**, Blake et al. as modified by Spaid clearly show and disclose, the method and system of claims 24 and 36, wherein said sample web pages are selected, using said computer system, as a statistically meaningful set of the web pages available for downloading via said network (the pages selected for analysis are the ones to be analyzed therefore the set of web pages selected would necessarily be statistically meaningful for the purposes of analysis)(Spaid; abstract, column 2 lines 54-61).

c) Consider **claims 30 and 40, and as applied to claims 24 and 36 above**, Blake et al. as modified by Spaid clearly show and disclose, the method and system of claims 24 and 36, further comprising the steps of: defining, using said computer system, for each sample page in said set of sample pages, a partial error indicative of the difference between said set of download performance parameters for said sample web pages as measured and as evaluated on the basis of said model, respectively (Blake; Abstract, column 4 lines 29-38); determining, using said computer system, from the partial errors defined for each sample page in said set of sample pages a global prediction error (Blake discloses calculating errors, while Robertson discloses evaluating single pages of a set of pages (partial) as well as the whole set of pages (global))(Blake; column 4 lines 29-38 Robertson; column 4 lines 36-55, column 6 lines 39-48); and selecting, using said computer system, said optimized model

including a value of said at least one optimization parameter minimizing said global prediction error (Blake; abstract, column 4 lines 56-61).

d) Consider **claims 31 and 41, and as applied to claims 30 and 40 above**, Blake et al. as modified by Spaid clearly show and disclose, the method and system of claims 30 and 40, comprising the step of defining, using said computer system, said global prediction error as one of a mean value (Blake; column 15 lines 24-43) and a peak value of the partial errors defined for each sample page in said set of sample pages.

e) Consider **claims 32 and 42, and as applied to claims 24 and 36 above**, Blake et al. as modified by Spaid clearly show and disclose, the method and system of claims 24 and 36, comprising the step of providing, using said computer system, different types of said at least one model for different types of said network (each model is based on the network it is intended to model, therefore each different type of network would have a different type of model)(Blake; abstract, column 4 lines 56-61).

f) Consider **claim 46, and as applied to claim 24 above**, Blake et al. as modified by Robertson et al. clearly show and disclose, a computer readable medium with a computer program product directly loadable into a memory of at least one computer, the computer program product including software code portions for performing the steps of any one of claims 24 to 34 when the product is run on the at least one computer (Robertson; column 3 lines 55-64).

5. **Claim 25-26 and 37-38** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Blake et al. (US Patent # 6,067,412)** in view of **Spaid (US Patent # US 7,269,643 B2)** in further view of **Robertson et al. (US Patent # US 6,973,490 B1)**.

a) Consider **claims 25 and 37, and as applied to claims 24 and 36 above**, Blake et al. as modified by Spaid clearly show and disclose, the method and system of claims 24 and 36, wherein said set of download performance parameters comprises at least one parameter selected from a group comprising: download time for a given web page, and an efficiency index indicative of how said given web page exploits the capacity of said network. However, Blake et al. as modified by Spaid does not specifically disclose download performance parameters comprises download time for a given web page.

Robertson et al. show and disclose the performance of communication systems having remotely readable digital documents, wherein download performance parameters comprises download time for a given web page (column 4 lines 37-55).

Therefore, it would have been obvious to one of ordinary skill in the art that the time the invention was made to incorporate download performance parameters comprises download time for a given web page, as taught by, Robertson et al. into the system of Blake et al. as modified by Spaid for the purpose of internet performance monitoring and analysis (Robertson; Abstract).

b) Consider **claims 26 and 38, and as applied to claims 24 and 36 above**, Blake et al. as modified by Spaid clearly show and disclose, the method and system of claims 24 and 36, wherein said at least one model includes at least one parameter selected from a group comprising: a throughput of said network, a round trip time of said network, and at least one of a type and size of each object included in said web pages. However, Blake et al. as modified by Spaid does not specifically disclose that the at least one model includes the parameter indicating a throughput of said network.

Robertson et al. show and disclose the performance of communication systems having remotely readable digital documents, wherein Robertson et al. discloses including the parameter indicating the throughput of the network.

Therefore, it would have been obvious to one of ordinary skill in the art that the time the invention was made to incorporate including the parameter of the throughput of the network, as taught by, Robertson et al. into the system of Blake et al. as modified by Spaid for the purpose of internet performance monitoring and analysis (Robertson; Abstract).

6. **Claims 28 and 29** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Blake et al. (US Patent # 6,067,412)** in view of **Spaid (US Patent # US 7,269,643 B2)** in further view of **Garg et al. (US Patent # US 6,327,677 B1)**.

a) Consider **claim 28**, and **as applied to claim 24 above**, Blake et al. as modified by Spaid clearly show and disclose, the method of claim 24, wherein said at least one model is selected, using said computer system, by taking into account at least one threshold related to operational parameters of said network. However, Blake et al. as modified by Spaid does not specifically disclose by taking into account at least one threshold related to operational parameters of said network.

Garg et al. show and disclose network monitoring systems, wherein Garg et al. discloses taking into account at least one threshold related to operational parameters of said network (column 1 lines 50-67, column 2 lines 1-96, column 5 lines 11-26).

Therefore, it would have been obvious to one of ordinary skill in the art that the time the invention was made to incorporate taking into account at least one threshold related to operational parameters of a network, as taught by, Garg et al. into the system of Blake et al. as modified by Spaid for the purpose of monitoring network performance (Garg; column 1 lines 35-42).

b) Consider **claim 29**, and **as applied to claim 28 above**, Blake et al. as modified by Spaid as modified by Garg et al. clearly show and disclose, the method of claim 28, comprising the step of providing in said network at least one server having a respective processing time and said at least one threshold is a function of said processing time (response time)(Garg; column 1 lines 50-67, column 2 lines 1-96, column 5 lines 11-26).

7. **Claims 33, 35, 43, 45, and 47** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Robertson et al. (US Patent # US 6,973,490 B1)** in view of **Blake et al. (US Patent # 6,067,412)**.

a) Consider **claims 33 and 43**, Robertson et al. clearly show and disclose, a method and system of evaluating download times of web pages accessible via a network, comprising the steps of: evaluating, using said computer system, said download times on the basis of at least one model comprising a module for evaluating the sum (column 4 lines 37-55) of: at least one first factor determined analytically on the basis of network (b, λ) and web page (n, d, h) parameters (column 4 lines 37-60, column 5 lines 17-18). However, Robertson et al. does not specifically disclose a second factor being a function of an optimization parameter (λ).

Blake et al. show and disclose identifying changes to computer system resources to improve performance, wherein a factor being a function of an optimization parameter (λ)(abstract, column lines 56-61, column 16 lines 20-27).

Therefore, it would have been obvious to one of ordinary skill in the art that the time the invention was made to incorporate and optimization parameter, as taught by, Blake et al. into the system of Robertson et al. for the purpose of improving performance (Blake; column 1 lines 7-10).

b) Consider **claims 35 and 45**, and **as applied to claims 26 or 33 and 38 or 43 above**,

Robertson et al. as modified by Blake et al. clearly show and disclose, the method and system of claim 26 or claim 33 and 38 or 45, wherein said at least one model corresponds to the following relationship:

$$t = \left(\frac{nd}{b} \right) + \left(\frac{nh}{b} + 2l + \frac{(n-1)l}{\lambda} \right)$$

where t is the total download time of the page (column 6 lines 39-48), n is the number of objects therein (Robertson; column 6 lines 39-48), d is the average size for its objects (Robertson; column 6 lines 39-48), b is the downstream throughput (Robertson; column 5 lines 17-18), h is the dimension of the HTTP headers (Robertson; column 8 lines 33-36), l is the network round trip time (Robertson; abstract, column 4 lines 56-61) and λ is said at least one optimization parameter (Blake; column 4 lines 43-55, column 6 lines 39-48, column 10 lines 47-62)(If the prior art structure is capable of performing the intended use, then it meets the claim. Robertson et al. clearly shows the calculation of the total download time of a web page by taking into account the various parameters that attribute to the download time of a web page. Blake et al. disclose optimizing the performance a system. Thus the combination of Robertson et al. with Blake et al. would have been obvious in order to optimize the system by optimizing the download time of a web page by taking into account the various parameters associated therewith. Therefore, the combination of Robertson et al. and Blake et al. meet the claim.)

c) Consider **claim 47**, and **as applied to claim 35 above**, Robertson et al. as modified by Blake et al. clearly show and disclose, a computer readable medium encoded with a computer program product directly loadable into a memory of at least one computer, the computer program

product including software code portions for performing the steps of claim 35 when the product is run on the at least one computer (Robertson; column 3 lines 55-64).

8. **Claims 34 and 44** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Robertson et al. (US Patent # US 6,973,490 B1)** in view of **Blake et al. (US Patent # 6,067,412)** in further view of **Stoica et al. (“A Simple Hyperbolic Model for Communication in Parallel Processing Environments).**

a) Consider **claims 34 and 44, and as applied to claims 33 and 43 above**, Robertson et al. as modified by Blake et al. clearly show and disclose, the method and system of claims 33 and 43. However, Robertson et al. as modified by Blake et al. does not specifically disclose said second factor is a function of hyperbolic type.

Stoica et al. show and disclose performance evaluation in communication networks, wherein a factor is a function of hyperbolic type (abstract, page 2 lines 12-26, page 3 lines 11-24).

Therefore, it would have been obvious to one of ordinary skill in the art that the time the invention was made to incorporate using a hyperbolic function, as taught by, Stoica et al. into the system of Robertson et al. as modified by Blake et al. for the purpose of evaluating the performance (Stoica; abstract).

Response to Arguments

9. Applicant's arguments filed 16JUN2009 have been fully considered but they are not persuasive.

In response to Applicant's argument that there is no suggestion to combine the references, the Examiner recognizes that obviousness can only be established by combining or modifying the

teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Blake clearly discloses identifying changes to computer system resources to improve performance (Blake; abstract, column 1 lines 7-10). Spaid clearly discloses a Web site quality measurement system and method include logging visitor data and session data for a Web site viewing session established between a Web site visitor and a Web site having one or more Web site pages (Spaid; abstract, column 1 lines 7-8).

One of ordinary skill in the art at the time the invention was made would have been motivated to combine the teachings of Spaid and Blake since both concern the performance evaluation systems and as such, both are within the same environment.

Therefore, it would have been obvious to one of ordinary skill in the art that the time the invention was made to incorporate performance evaluation or programs, as taught by, Spaid into the system of Blake for the purpose of evaluating the performance of a website composed of web pages (Spaid, abstract), thereby allowing the quality of the web pages to be measured.

Applicant argues that "Blake's disclosure is not related to a "method, implemented using a computer system, for evaluating download performance of web pages accessible via a network," as recited in claim 24. Furthermore, Blake does not teach or suggest, among other things, at least "defining a set of sample web pages [and] measuring said set of download performance parameters for said sample web pages," as recited in claim 24.", and Applicant argues that "Spaid fails to teach or suggest ..." "defining a set of sample web pages [and] measuring said set of download performance parameters for said sample web pages, " " and "Robertson fails to teach or suggest at least

Applicants' claimed "defining a set of sample web page, s [and] measuring said set of download performance parameters for said sample web pages, " " and "Garg fails to teach or suggest at least Applicants' claimed "defining a set of sample web pages [and] measuring said set of download performance parameters for said sample web pages, " ."

The Examiner respectfully disagrees; in response to Applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). Blake clearly discloses identifying changes to computer system resources to improve performance (Blake; abstract, column 1 lines 7-10). Spaid clearly discloses a Web site quality measurement system and method include logging visitor data and session data for a Web site viewing session established between a Web site visitor and a Web site having one or more Web site pages (Spaid; abstract, column 1 lines 7-8). Furthermore, Blake in view of Spaid clearly disclose defining a set of sample web pages (a web site having one or more Web site pages)(Spaid; abstract, column 2 lines 54-61) [and] measuring said set of download performance parameters (Blake; abstract, column 3 lines 48-53). Blake clearly discloses the performance evaluation based on measuring a set of performance parameters and Spaid clearly discloses defining a set of web pages and measuring the quality (i.e. performance) of those web pages. Therefore, Blake as modified by Spaid clearly discloses defining a set of sample web pages [and] measuring said set of download performance parameters for said sample web pages.

Applicant argues "...there would not have been any motivation for one of ordinary skill in the art to combine Blake, which is related to "determining a cost-effective configuration for a target computer system that executes a set of target computer program" (Blake, col. 3, lines 48-51),

with Spaid which is related to "measuring the quality of individual Web site visits for individual visitors" (Spaid, col. 2, lines 51-52).

The Examiner respectfully disagrees; both Blake and Spaid are clearly directed toward performance evaluation systems. Blake clearly discloses identifying changes to computer system resources to improve performance (Blake; abstract, column 1 lines 7-10). Spaid clearly discloses a Web site quality measurement system and method include logging visitor data and session data for a Web site viewing session established between a Web site visitor and a Web site having one or more Web site pages (Spaid; abstract, column 1 lines 7-8).

One of ordinary skill in the art at the time the invention was made would have been motivated to combine the teachings of Spaid and Blake since both concern the performance evaluation systems and as such, both are within the same environment.

Therefore, it would have been obvious to one of ordinary skill in the art that the time the invention was made to incorporate performance evaluation or programs, as taught by, Spaid into the system of Blake for the purpose of evaluating the performance of a website composed of web pages (Spaid, abstract), thereby allowing the quality of the web pages to be measured.

Applicant argues "...that the Office Action's analysis of the prior art references and the suggested combination is clearly based on impermissible hindsight."

In response to Applicant's argument that the Examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the Applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

Applicant argues that "...Robertson does not teach or suggest "evaluating the sum of at least one first factor determined analytically on the basis of network (b, λ) and web page (n, d, h) parameters; and a second factor being a function of an optimisation parameter (X)," as recited in claim 33 (emphases added). Despite the Office Action's allegation that Blake discloses "a factor being a function of an optimization parameter (λ)" (Office Action, p. 12), with which Applicants do not necessarily agree, Blake still does not teach or suggest at least "evaluating the sum of at least one first factor determined analytically..., and a second factor..." as recited in claim 33 (emphases added).

The Examiner respectfully disagrees; in response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). Robertson clearly discloses evaluating the sum (column 4 lines 37-55) of at least one first factor determined analytically on the basis of network (b, λ) and web page (n, d, h) parameters (Robertson; column 4 lines 56-60 and column 5 lines 17-18). Blake clearly discloses a second factor being a function of an optimization parameter (X)(Blake; abstract, column 4 lines 56-61). Robertson clearly discloses determining a factor for the evaluation of performance based on network and web page parameters. Blake clearly discloses the optimization of a particular parameter. Therefore, the combination of Robertson and Blake clearly disclose the evaluating the sum of at least one first factor determined analytically on the basis of network (b, λ) and web page (n, d, h) parameters; and a second factor being a function of an optimization parameter (X).

Applicant's arguments with respect to **claims 34 and 44** have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- US 7,532,892 B2
- US 2002/0194310 A1
- US 2006/0031537 A1
- US 6,651,099 B1

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DANIEL C. MURRAY whose telephone number is 571-270-1773. The examiner can normally be reached on Monday - Friday 0800-1700 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tonia Dollinger can be reached on (571)-272-4170. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/DCM/
Examiner, Art Unit 2443

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/Tonia LM Dollinger/

Supervisory Patent Examiner, Art Unit 2443